

# PATENT ABSTRACTS OF JAPAN

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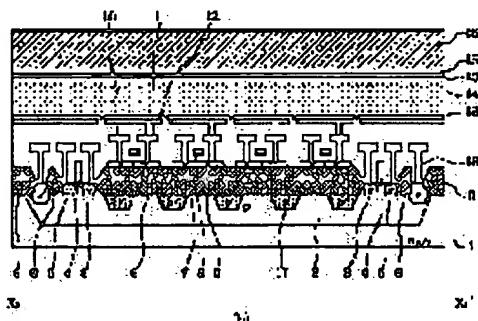
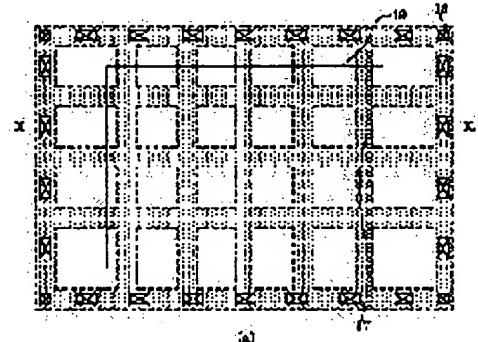
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## (54) DISPLAY DEVICE

### (57) Abstract:

**PROBLEM TO BE SOLVED:** To obtain a display device which has high fineness, high luminance and high contrast and is compact, low in cost and wide in visual field angle by providing the device with a high-concn. impurity region having the impurity concn. higher than the impurity concn. of a semiconductor substrate.

**SOLUTION:** If the semiconductor substrate 1 is an n type substrate, well region 2 as p type. The high-concn. impurity regions 17 are the p type and are disposed under a field oxidized film 6 in the lower part of a display region 19. The high-concn. impurity regions 17 are formed to a grid form toward Y and X directions within the display region 19. These regions are connected to a power source potential through connecting parts 18 in the outer peripheral part of the display region. If there are no well region 2 and high-concn. impurity regions 17, the bias of the highest potential is applied on TFTs 7 to 9. The threshold is then changed to the lower potential and the degradation in the contrast is resulted by the leakage of video signals. If, however, the device is provided with the well regions 2 of the p type and the min. potential is applied thereon, the threshold does not fluctuate and the display of the high contrast is made possible.



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